

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Determination That the Kern Primrose Sphinx Moth (*Euproserpinus euterpe*) Is a Threatened Species

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines *Euproserpinus euterpe*, the Kern primrose sphinx moth, a native insect of California, to be a Threatened species. The species occurs in low numbers at a single locality in the Walker Basin, Kern County, California. Since the species is so limited, and sought after, collecting is a threat. This action will give the species the protection provided by the Endangered Species Act of 1973, as amended.

DATES: This rule becomes effective on May 9, 1980.

FOR FURTHER INFORMATION CONTACT: Mr. John L. Spinks, Jr., Chief, Office of Endangered Species, Fish and Wildlife Service, U.S. Department of the Interior, Washington, D.C. 20240, 703/235-2771.

SUPPLEMENTARY INFORMATION:**Background**

Euproserpinus euterpe was scientifically described by Henry Edwards in 1888. The moth was believed to have been discovered near San Diego, California, but the best available evidence indicates that the moth was actually first collected in the Walker Basin, Kern County, California, where it was rediscovered in 1974. *Euproserpinus euterpe* occurs in limited numbers, and has a flight period from late February to early April. The only larval foodplant is an evening primrose (*Oenothera contorta epilobioides*). The larvae develop in the spring, pupate in the soil, and diapause (remain inactive) until the following spring, when they emerge as adults.

The U.S. Fish and Wildlife Service was petitioned on March 5, 1977, by Dr. Paul M. Tuskes of the University of California at Davis to place *Euproserpinus euterpe* on the U.S. List of Endangered and Threatened Species. On July 3, 1978, the Service published a proposed rulemaking in the Federal Register (43 FR 28938-28945) advising that sufficient evidence was on file to support a determination that the Kern primrose sphinx moth was a Threatened species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531, et

seq.). That proposal summarized the factors thought to be contributing to the likelihood that the Kern primrose sphinx moth could become Endangered within the foreseeable future, specified the prohibitions which would be applicable if such a determination were made, and solicited comments, suggestions, objections, and factual information from any interested person. Section 4(b)(1)(A) of the Act requires that the Governor of each State or Territory within which a resident species of wildlife is known to occur be notified and provided a 90 day comment period, before any such species is determined to be Threatened or Endangered. A letter was sent to Governor Edmund G. Brown, Jr. of the State of California on July 14, 1978, notifying him of the proposed rulemaking for the Kern primrose sphinx moth. On July 14, 1978, letters were sent to interested parties notifying them of the proposal and soliciting their comments and suggestions.

A public meeting on the July 3, 1978 proposal to list *Euproserpinus euterpe* as Threatened was held in Bakersfield, California on September 18, 1979.

Official comment was received from the Secretary for Resources of the State of California. He believed that the Kern primrose sphinx moth qualified as a Threatened species, and restated this opinion in the comment period following the public meeting.

Summary of Comments and Recommendations

Section 4(b)(1)(C) of the Act requires that a summary of all comments and recommendations received be published in the Federal Register prior to adding any U.S. species to the List of Endangered and Threatened Wildlife and Plants.

Eight additional comments were received in the comment period following the proposal of *Euproserpinus euterpe* as Threatened. A conservation organization and a lepidopterist urged complete protection of the moth's habitat. A professional entomologist, and expert on sphingid moths, considered *Euproserpinus euterpe* to be the rarest sphinx moth in North America and recommended protection for the moth's habitat. He stated that active search had not revealed other localities for *Euproserpinus euterpe*. A private citizen opposed placing any restrictions on collecting *Euproserpinus euterpe* or any other Lepidoptera. Two professional lepidopterists opposed the listing of the moth as Threatened or Endangered because they believed the moth to have a much larger distribution in California, but they provided no supportive evidence. An amateur lepidopterist, and

student of sphingid moths, also believed that *Euproserpinus euterpe* might have a larger distribution in California, but provided no supporting evidence. He pointed out that the type locality of San Diego, California might be in error, and in fact be represented by specimens from Kern County, California. This would mean that *Euproserpinus euterpe* has never been found outside of Kern County, California. One non-substantive comment was received.

Comments, either oral or written, were received from ten persons at the public meeting and during the following comment period. Eight comments supported the listing proposal and one comment opposed it.

The Kern County, California Planning Department stated that it was willing to cooperate in protecting *Euproserpinus euterpe*, but would have difficulty in doing this without knowing the exact localities where the moth occurred. Mr. John Lane, representing the Xerces Society, an organization involved with conservation of arthropods, presented evidence indicating that *Euproserpinus euterpe* had never been collected outside the Walker Basin, Kern County, California. Dr. Robert M. Pyle, Chairman of the Survival Service Commission of the International Union for the Conservation of Nature and Natural Resources, expressed this organization's support of the listing proposal. Dr. Paul M. Tuskes, the entomologist who petitioned to have *Euproserpinus euterpe* listed, submitted a letter and a manuscript derived from his field studies of *Euproserpinus euterpe* from 1975 to 1979. The moth was present in low numbers and very restricted in distribution from 1975 to 1978. In 1979 many more moths were present and they ranged more widely over the Walker Basin, but were abundant only at one site. Dr. Tuskes believed that these larger numbers represented emergence from pupae which had diapaused for varying lengths of time from the previous few years and which had emerged simultaneously due to favorable climatic conditions in 1979. Many female *Euproserpinus euterpe* were observed laying eggs on filaree (*Erodium cicutarium*), an exotic weed on which larvae of the moth cannot feed, causing stress on the *Euproserpinus euterpe* population and possibly accounting for its low numbers. Dr. Tuskes felt that the intensity of collecting of the moth during the short flight period was sufficient to threaten its continued survival. Four other entomologists and biologists supported the proposal, but provided no specific comments. Mr. John Johnson stated that

despite extensive search he had been unable to find *Euproserpinus euterpe* outside the Walker Basin.

Dr. J. M. Cadiou reiterated his opposition to the listing proposal, because he believed that the moth occurs outside the Walker Basin and that collecting does not threaten the survival of the species.

After a thorough review and consideration of all the information available, the Director has determined that *Euproserpinus euterpe* is threatened with becoming endangered throughout all or a significant portion of its range due to one or more of the factors described in Section 4(a) of the Act, as outlined in the proposed rulemaking.

These factors and their application to *Euproserpinus euterpe* are as follows:

(1) *The present or threatened destruction, modification, or curtailment of its habitat or range.* This species had been thought extinct but was rediscovered in 1974. It was rediscovered in the Walker Basin, California, an area between the Greenhorn and Piute Mountains, in a small colony in a barley field on a privately owned cattle ranch. The moth has since been found to be more widely distributed, in low density, in the Walker Basin, but this extension in range may represent only a temporary increase in numbers following unusually favorable climatic conditions. Intensive collecting has not revealed this moth outside the Walker Basin. The present management of the barley field in which the moth was rediscovered does not seem to be a threat to the moth or its larval food plant, a primrose (*Oenothera contorta epilobioides*), but if the management of the field is changed, the primrose, and thus the moth may be affected. Changes in land management of other areas of the basin where the moth occurs could also affect its populations.

(2) *Overutilization for commercial, sporting, scientific, or educational purposes.* The rarity of *Euproserpinus euterpe* in collections makes it highly desirable to sphingid moth collectors. It has been estimated that single specimens may be worth as much as \$100. Since the proposal to list *Euproserpinus euterpe*, attempts have been made to buy specimens from the entomologist studying the species, and collectors have continued to take moths from the single known colony. Most (about 75%) of the moths taken by collectors are females, because they fly more slowly than males. This may be particularly detrimental to the reproductive success of the moth. *Euproserpinus euterpe* was present only

in small numbers from 1974 to 1978, (27 moths were collected during this five year period), but was more abundant in 1979, when 49 moths were collected over an eleven day period. It is believed that pupae from several different cohorts (age classes) diapaused (remained inactive) until unusually favorable climatic conditions in 1979, when they emerged simultaneously.

Due to the rarity and restricted distribution of *Euproserpinus euterpe*, collecting represents a threat to the continued survival of this species.

(3) *Disease or predation.* Not applicable to this species.

(4) *The inadequacy of existing regulatory mechanisms.* There currently exist no State or Federal laws protecting this species or its habitat.

(5) *Other natural or man-made factors affecting its continued existence.* In 1979, many female *Euproserpinus euterpe* were observed ovipositing (laying eggs) on filaree (*Erodium cicutarium*), an exotic weed on which larvae of the moth cannot feed. Since first instar larvae are not active, they are unable to locate proper food plants (*Oenothera contorta epilobioides*) and starve. It appears that strong selection is acting on *Euproserpinus* populations to favor females with appropriate host plant selection behavior. Collecting females during the brief flight and oviposition period could have an especially detrimental effect because it would reduce the genetic variability necessary to allow natural selection of females with appropriate oviposition behavior.

Effect of the Rulemaking

Section 7(a) of the Act as amended provides:

(1) The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purposes of this Act. All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species listed pursuant to section 4 of this Act.

(2) Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an 'agency action') is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee pursuant to subsection (h) of this section. * * *

Provisions for Interagency Cooperation were published on January 4, 1978, in the Federal Register (43 FR 870-876) and codified at 50 CFR Part 402. These regulations are intended to assist Federal agencies in complying with Section 7(a) of the Act. This rulemaking requires Federal agencies to satisfy these statutory and regulatory obligations with respect to this species. There are no federal actions known at present which would be affected by this rule. Endangered Species regulations already published in Title 50 of the Code of Federal Regulations set forth a series of general prohibitions and exceptions, which apply to all Endangered species. All of those prohibitions and exceptions also apply to any Threatened species, unless a special rule pertaining to that Threatened species has been published and indicates otherwise. The regulations referred to above, which pertain to Endangered and Threatened species, are found at Sections 17.21 and 17.31 of Title 50, and are summarized below.

With respect to *Euproserpinus euterpe*, all prohibitions of Section 9(a)(1) of the Act, as implemented by 50 CFR Part 17.21 apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export or ship in interstate commerce in the course of a commercial activity; or sell or offer for sale in interstate or foreign commerce this species. It will also be illegal to possess, sell, deliver, carry, transport, or ship any specimen of *Euproserpinus euterpe* which has been illegally taken. Certain exceptions apply to agents of the Service and State conservation agencies. Regulations published in the Federal Register of September 28, 1975 (40 FR 44412), codified at 50 CFR 17.22 and 17.23, provided for the issuance of permits to carry out otherwise prohibited activities involving Endangered or Threatened species under certain circumstances. Such permits involving Endangered species are available for scientific purposes or to enhance the propagation or survival of the species. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship which would be suffered if such relief were not available.

Effect Internationally

In addition to the protection provided by the Act, the Service will review the Kern primrose sphinx moth to determine whether it should be proposed to the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora for placement upon the appropriate

Appendix(ices) to that Convention or whether they should be considered under other appropriate international agreements.

National Environmental Policy Act

An environmental assessment has been prepared and is on file in the Service's Washington Office of Endangered Species. It addresses this action as it involves the Kern primrose sphinx moth. The assessment is the basis for a decision that this determination is not a major Federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969.

Critical Habitat

The Endangered Species Act Amendments of 1978 added the following provision to subsection 4(a)(1) of the Endangered Species Act of 1973:

At the time any such regulation [to determine a species to be an Endangered or Threatened species] is proposed, the Secretary shall by regulation, to the

maximum extent prudent, specify any habitat of such species which is then considered to be critical habitat.

Euproserpinus euterpe is threatened by taking (See discussion under factors 2 and 4 in the conclusion section of this rule). Publication of Critical Habitat maps would make this species more vulnerable to taking by moth collectors, and therefore it would not be prudent to determine Critical Habitat. The Service now proceeds with this final rulemaking to determine this species as Threatened under the authority contained in the Endangered Species Act of 1973, as amended.

The primary author of this rule is Dr. Michael M. Bentzien, Office of Endangered Species, 703/235-1975.

Regulations Promulgation

Accordingly, § 17.11 of Part 17 of Chapter I of Title 50 of the U.S. Code of Federal Regulations is amended as follows:

1. By adding the Kern primrose sphinx moth to the list, alphabetically, under "Insecta" as indicated below:

§ 17.11 Endangered and threatened wildlife.

Species		Range		Status	When listed	Special rules
Scientific name	Common name	Known distribution	Portion endangered			
<i>Euproserpinus euterpe</i>	Moth, Kern primrose sphinx.	U.S.A. (California).....	Entire	T	NA

Note.—The Department has determined that this is not a significant rule and does not require the preparation of a regulatory analysis under Executive Order 12044 and 43 CFR 14.

Dated: April 3, 1980.

Robert S. Cook,

Acting Director, Fish and Wildlife Service.

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